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ABSTRACT

Discussed are guidelines for vocational program development for handicapped students. The author rejects the norm-referenced system that compares individual performance to group performance and advocates the criterion-referenced system that is based upon mastery of specific skills. A vocational program's effectiveness is then related to five considerations: individual differences, which the author states are not accounted for in norm-referenced tests; instructional objectives, which are said to communicate teacher expentancies to the learner; test construction, which the author states needs to stem from the instructional objectives; remediation, which can follow a student's incomplete mastery of a skill without traditional failure; and social consequences, which are said to be fostered by criterion-referenced systems. A joint vocational/academic program is then described that incorporates the discussed format. The students are designated as educable mentally handicapped and are participating in the vocational education program that has the terminal goal of job placement. The students eventually are placed in local businesses and may return to vocational school for additional training. Results indicate that the program is effective. (CB)

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COMPREHENSIVE VOCATIONAL PROGRAMS FOR HANDICAPPED STUDENTS

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EC 040 648

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I would like to discuss specific guidelines for the development of comprehensive programs for handicapped students and to talk to you about such a program which is now operational and the outcomes it is producing.

I must preface my remarks with the statement that all the questions which may be asked about education reduce to these two:

(1) What eudcational outcomes are valued as ends?

(2) What are the most effective and acceptable ways of realizing these ends?

Before any real and lasting solutions are reached, educators must face and deal with these questions.

*A system's effectiveness is related to five important considerations:

(1) Individual differences,

(2) Instructional objectives,

(3) Test construction,

(4) Remediation, and

(5) Social consequences.

All of these five points have to do with the two main types of student evaluation processes which exist today. The process which is most prevalent and probably most detrimental to the student is the "norm-referenced" system.

What is a "norm-referenced" system? It describes the extent to which individuals differ on various characteristics, it encourages competitiveness, it provides vague information about the learner, but relatively good information about the group. "Norm-referenced" systems are inappropriate generally in that they tend to operate in a vacuum. The content is usually determined within the educational institution and is drawn largely from the teachers' fund of knowledge and from published material. The assumption is made that the content is closely related to student performance expectations by society. The current issue of relevance maintains that this is not true. "Norm-referenced" systems state the competence of a particular student in comparative terms; that is, in relation to his classmates. A particular student's performance in this framework may not be meaningful at all to a potential employer. He needs to know how the performance level of the student compares to the job demands he is trying to satisfy. In essence, a "norm-referenced" evaluation procedure hinges upon the performance of a group. Groups are not employed, individuals are.

The process which is advocated in this presentation is a criterion-referenced program. What is a criterion-referenced system? It is based upon mastery of a particular skill or skills. It gives specific information about the learner and the learning environment as well as enhancing the social relationship between the students and the teacher. It does <u>not</u> operate in a vacuum in that the instructional content is

drawn from an additional source: the student's outside-school vocational goal. It focuses on the individual student and the instructional method rather than the group.

In describing the overall program advocated, it will be useful to examine the previously mentioned five considerations used to evaluate a program's effectiveness.

Individual Differences

Tests may be classified as either "norm-referenced" or criterion referenced. "Norm-referenced" tests are based upon relative rankings between individuals. For example, we compute an average score which becomes the norm with which all test scores are compared. Most standardized achievement, intelligence and aptitude tests are examples. Any time a teaches distributes grades of A, B, C, D, and F, as they are commonly used, he is basing that distribution upon the above factors. "Norm-referenced" tests are based on the notion of variability of individual differences. This type of test is dependent upon the existence and maintenance of group variability. "Norm-referenced" tests create artificial differences among individuals. This is true because we have no way of knowing whether the learner was unable to grasp the material or if it was just a product of the day the material was presented, the method of presentation, the emotional state of the learner, or all four. Also, someone has to fall below average. Differences between students are a direct artifact of the test being used to evaluate them. Such tests may be used to describe individual differences but not to

create differences for purposes of instruction. Finally, bear in mind that the most plausible explanation for the continued use of normative evaluation is its convenience for educators. To use such a system allows for the practice of holding time constant. This is done in spite of the information that not only do students learn at different rates by content area, but an individual's learning rate will vary across content areas. These are important factors that teachers who persist in using group instruction and evaluation choose to ignore.

Instructional Objectives

Instructional objectives communicate the expectancies of the teacher to the learner. If objectives are stated for "norm-referenced tests, the expectancies and process of assessing instruction are extremely vague. They are frequently stated with words like "to know," "to understand," or "to appreciate," with little reference as to what the student is to do in order to demonstrate "understanding" or "knowing."

To use criterion-referenced tests, the objectives must be stated in measureable performances, the conditions under which the behavior is to be performed, and the minimum level of acceptability. They must be communicated to the learner before the instruction takes place. No guessing games, teachers!

Test Construction

I will not dwell on test construction except to say that the items must be determined by and derived from the instructional objectives. They must be administered before the instruction takes place, and again afterward. This is the only way one can evaluate a method of instruction and determine what the student has learned as a result of what has been done. Student progress is marked by either "complete" or "incomplete."

Remediation

Remediation follows directly from the preceding statements regarding test items. The information provided by following the above procedures allow for modification of instructional methods and provides immediate feedback to both the teacher and the learner. The educational "gap" can be filled immediately without waiting and without unnecessary student anxiety. It provides the learner the opportunity to reach the stated goal without the traditional punishing effects of failure. It allows the teacher to increase competency by virtue of refinement of his or her instructional techniques.

Social Consequences

In addition to the social consequences implicit in the remediation unit, criterion-referenced programs foster helping relationships between learners and between learners and teachers. Competitiveness is removed because students are striving for an educational goal - not to out-guess

the teacher or to defeat a classmate. It focuses the learner on the task and not upon how he ranks. Needless to say, this creates an atmosphere highly conducive to learning.*

A program was designed and has been in operation for the last fifteen months which is based on the foregoing propositions and procedures. It is a joint vocational/academic program for students between the ages of 14 and 21. They are officially designated as EMR by virtue of scoring between 55 and 79 in a standard I.Q. measure; however, most display symptoms of secondary disabilities which range from physical impairment to emotional disturbance. The school was organized with the cooperation of the Tennessee State Offices of Special Education, Vocational Education, Vocational Rehabilitation and The Hamilton County Department of Education, Pupil Personnel Services, Chattanooga, Tennessee.

Due to the poverty of measureable learning in the history of the students, the terminal goal is job placement. This does not mean that "going to work" is the only immediate alternative available to graduating students. A student may be placed in an area vocational technical school for further training, be placed in a job, or return to an academic school in the system. There have already been instances of all three.

*Material drawn in part from a paper by William Cormier and Thomas Sherman with University of Tennessee at Knoxville, and Virginia Polytechnic Institute, respectively.

The administration of the program perceives the school, the students, and business and industry as all being components of a feedback loop. As described in this paper, a major source of curriculum is local business and industry. A vocational specialist gains entry to businesses and industries related to the vocational areas taught at the school. Specific job descriptions are written after the specialist makes observations, talks with employees performing the job, and discusses the job in depth with the supervisory personnel. The information is then translated into instructional objectives and distributed to the appropriate vocational and academic areas. This constitutes the core curriculum. In addition, certain feature objectives have been formulated in the academic areas, and objectives are added or changed on a daily basis. "Change" is regarded as a necessary part of the program, and pertains not only to curriculum, but to methodology and philosophy. Present conditions do not permit a discussion of the program in its entirety, but here are some additional key items which may be of interest:

1. The school does not give students letter grades - A student's progress is marked by indicating which objectives he has successfully completed.

2. There are programs of social reinforcement such as "Rap Day" to maintain desired behaviors.

3. Part time job placement is effected and students are closely supervised by school specialists. A student

3. (Continued)

may be permanently placed after a time or may be "recycled" for additional instruction.

4. The program began in September, 1970. The first preliminary job placement was made in January, 1971. From January, 1971 to May 13, 1971, students placed had collectively earned over $12,000 and only one student was placed full-time; the others worked part time and attended school part time.

5. One-year follow-up is required after fulltime placement.

6. There is an on-going action research component which has validated innovative and effective instructional techniques.

7. One year of instruction has generated between 3 to 9 years academic growth for some students.

8. Projected earnings of students placed to date is an estimated $30,000. (About 1/3 the original cost of vocational capital outlay for tooling up and for specialists' salaries.)

Conclusion

Effective programs of the future must be - by public demand and economic necessity -

1. Criterion-referenced,
2. Relevant to social and business needs,
3. Relevant to students' needs,
4. Economically justifiable,
5. Contain a research and evaluation component, and
6. Must anticipate and actively plan for change.